What Is Claimed Is:

1. A propeller comprising:

a blade assembly having a plurality of linking members operatively connected to one another; and,

a blade surface engaged with said blade assembly, covering at least a portion of said blade assembly, and operatively arranged to change shape when said linking members are moved with respect to one another.

2. The propeller recited in Claim 1 further comprising:

a propeller shaft; and,

a plurality of collars, each collar in said plurality of collars radially surrounding said shaft, operatively arranged to slide longitudinally along said shaft while remaining rotationally fixed about said shaft, and having a collar link point; and,

wherein said blade assembly includes a plurality of blade link points pivotally connected to respective collar link points.

3. The propeller recited in Claim 2 wherein said shaft further comprises an end; and, wherein each successive collar in said plurality of collars:

is positioned further from said end than a preceding collar; and,

has a collar link point at a greater radial angle from a radial axis for said shaft than a collar link point for said preceding collar.

4. The propeller recited in Claim 2 further comprising:

an actuator operatively connected to at least two collars in said plurality of collars; wherein said actuator operates to vary a longitudinal distance between said at least two collars along said shaft; and,

wherein said linking members move with respect to one another in response to varying said distance between said collars.

5. The propeller recited in Claim 4 wherein said actuator is selected from a group of actuators consisting of pneumatic actuators, hydraulic actuators, and micro-electrical mechanical systems.

6. The propeller recited in Claim 4 wherein said plurality of linking members further comprises a plurality of lattice bars; and,

wherein each lattice bar has a plurality of connection points in a straight line and said plurality of lattice bars are pivotally connected to one another at said connection points; and,

wherein said blade assembly further comprises a folding lattice.

7. The propeller recited in Claim 6 wherein at least two lattice bars in said plurality of lattice bars have blade link points; and,

wherein each of said at least two lattice bars is connected, respectively, to one of said respective collar link points.

8. The propeller recited in Claim 6 wherein said blade surface comprises a flexible material conforming to a shape of said folding lattice and covering said folding lattice.

9. The propeller recited in Claim 8 wherein said flexible material comprises urethane.

10. The propeller recited in Claim 1 wherein said linking members further comprise a radial expansion and retraction structure having:

a plurality of structure members pivotally connected to one another to form a closed loop; and,

a plurality of mounting members pivotally connected to one another to form a closed loop and pivotally and slidingly connected to corresponding structure members; and,

wherein each of said mounting members has a blade link point; and,

wherein said blade surface varies in size as said blade link points are moved with respect to one another.

11. The propeller recited in Claim 10 further comprising:

a propeller shaft; and,

a plurality of collars, each collar in said plurality of collars radially surrounding said shaft, operatively arranged to slide longitudinally along said shaft while remaining rotationally fixed about said shaft, and having a collar link point; and,

wherein at least two of said blade link points are pivotally connected to first respective collar link points.

12. The propeller recited in Claim 11 wherein said shaft further comprises an end; and,

wherein each successive collar in said plurality of collars:

is positioned further from said end than a preceding collar; and,

has a collar link point at a greater radial angle from a radial axis for said shaft than a collar link point for said preceding collar.

13. The propeller recited in Claim 11 further comprising:

an actuator operatively connected to at least two collars in said plurality of collars; wherein said actuator operates to vary a longitudinal distance between said at least two collars along said shaft; and,

wherein said blade surface varies in size in response to varying said distance between said at least two collars.

14. The propeller recited in Claim 13 wherein said actuator is selected from a group of actuators consisting of pneumatic actuators, hydraulic actuators, and micro-electrical mechanical systems.

15. The propeller recited in Claim 13 wherein said blade surface comprises a flexible material conforming to a shape of said radial expansion and retraction structure and covering said radial expansion and retraction structure.

16. The propeller recited in Claim 15 wherein said flexible material comprises urethane.

17. The propeller recited in Claim 13 wherein said blade surface further comprises a plurality of overlapping plates having a surface area, each plate in said plurality of overlapping plates fixedly connected to a corresponding mounting member in said plurality of mounting members; and,

wherein said surface area varies in size in response to varying said distance between said at least two collars.

18. The propeller recited in Claim 17 wherein said plurality of mounting members further comprises four pairs of overlapping mounting members;

wherein blade link points for one pair of said four pairs of overlapping mounting members are pivotally connected to second corresponding collar link points; and,

wherein said surface area decreases in size as said second corresponding collar link points are moved further apart and increases in size as said second corresponding collar link points are moved closer together.

19. The propeller recited in Claim 18 wherein for each pair of members in said four pairs of overlapping mounting members, a first mounting member is a part of a front surface for said truss and a second mounting member is a part of a back surface for said truss;

wherein said plurality of overlapping plates further comprises four pairs of plates; and,

wherein for each pair of said four pairs of plates, a first plate is connected to a respective said first mounting member and a second plate is connected to a respective said second mounting member.

20. The propeller recited in Claim 19 wherein for said each pair in said four pairs of plates, both plates have a same shape.

21. The propeller recited in Claim 20 wherein for two pairs of said four pairs of plates, said plates are approximately triangular in shape; and,

wherein for a remaining two pairs of said four pairs of plates, said plates are approximately trapezoidal in shape.

22. The propeller recited in Claim 19 wherein said blade assembly further comprises a plurality of radial expansion and retraction structures and a corresponding plurality of plates associated with said plurality of radial expansion and retraction structures;

wherein each structure in said plurality of structures is pivotally connected, at corresponding blade link points, to at least one other structure in said plurality of structures;

wherein at least one structure in said plurality of structures is pivotally connected at a pair of blade link points to said corresponding collar link points; and,

wherein said surface area for each plurality of plates in said corresponding plurality of plates decreases as said corresponding collar link points are moved further apart and increases as said corresponding collar link points are moved closer together.

23. The propeller recited in Claim 1 further comprising:

said propeller connected to a waterborne vessel.

24. The propeller recited in Claim 1 further comprising:

said propeller connected to a submersible vessel.

25. The propeller recited in Claim 1 further comprising:

said propeller connected to an aircraft.

26. The propeller recited in Claim 1 further comprising:

said propeller connected to a fan operating to move fluids; and,

wherein said fan is operatively arranged to remain stationary with respect to said fluids.

27. A method for varying dimensions of a propeller comprising:

operatively connecting a plurality of linking members to form a blade assembly;

moving said linking members with respect to one another;

covering at least a portion of said blade assembly with a blade surface; and,

changing a shape for said blade surface in response to moving said linking members.

28. The method recited in Claim 27 wherein the propeller further comprises a shaft, and radially surrounding the shaft, a plurality of collars; and,

wherein the method further comprises:

operatively connecting said blade surface and said plurality of collars;

sliding said collars along said shaft to vary a distance between said collars; and,

changing said shape of said blade surface in response to sliding said collars.

29. The method recited in Claim 28 wherein said propeller further comprises a linear actuator; and,

wherein the method further comprises:

operatively connecting said actuator to at least two collars in said plurality of collars; and,

wherein changing said shape of said blade surface in response to sliding said collars further comprises operating said actuator to slide said at least two collars.

30. The method recited in Claim 28 wherein said propeller further comprises a rotational actuator, and

wherein the method further comprises:

operatively connecting said rotational actuator to at least two linking members in said plurality of linking members, and

wherein changing a shape for said blade surface in response to moving said linking members includes using said rotational actuator to move said linking members.